

Appl. No.: 09/897,757
Amdt. dated: May 5, 2003
Reply to Office Action of February 5, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-13 (cancelled)

14. (currently amended) A process for the production of gasoline with a low sulfur content, comprising at least three stages:

- A) a first stage in which the sulfur-containing compounds present in the gasoline are at least partially transformed into H₂S and into saturated sulfur-containing compounds,
- B) a second stage comprising separating H₂S from the gasoline produced in stage A,
- C) a third stage in which saturated sulfur-containing compounds remaining in the gasoline are at least partially transformed into H₂S, wherein the stage C is carried out in the presence of a catalyst comprising at least one metal of nickel, cobalt, iron, molybdenum, or tungsten, and the stage C is carried out with an H₂/HC ratio of 200-600 liters per liter.

15. (previously added) A process according to claim 14, further comprising a pretreatment stage, before stage A, comprising hydrogenating diolefins in the feedstock.

16. (previously added) A process according to claim 14, wherein the feedstock is a catalytic cracking gasoline.

17. (previously added) A process according to claim 14, wherein stage A is carried out by passing the feedstock, in the presence of hydrogen, over a catalyst comprising at least one element selected from the group consisting of at least one element of group VIII and at least one element of group VIb, said catalyst being at least in part in sulfide form.

18. (previously added) A process according to claim 17, wherein the element of

Appl. No.: 09/897,757
Amdt. dated: May 5, 2003
Reply to Office Action of February 5, 2003

group VIII, when it is present, is nickel or cobalt, and the element of group VIb, when it is present, is molybdenum or tungsten.

19. (currently amended) A process according to claim 18, wherein stage A is carried out at a temperature of between about 210°C and about 350°C, under a pressure generally between about 1 and about 5 Mpa, with a volumetric flow rate of the liquid of between about 1 and about 10 h⁻¹, ~~and an H₂/HC ratio of between about 100 and about 600 liters.~~

Claim 20 (cancelled)

21. (previously added) A process according to claim 20, wherein the base metal content is between 1 and 60% by weight, and said metal is sulfurized.

22. (currently amended) A process according to claim 14, wherein stage C is carried out at a temperature of between about 200°C and about 350°C, a pressure of between about 0.5 and about 5 Mpa, and a liquid volumetric flow rate between about 0.5 and about 10 h⁻¹ ~~and an H₂/HC ratio of between about 100 and about 600 liters per liter.~~

23. (previously added) A process according to claim 14 implemented with at least two separate reactors, not including a feedstock pretreatment reactor, whereby the first reactor contains catalyst for stage A and the second reactor contains at least catalyst for stage C.

24. (previously added) A process according to claim 14 implemented with at least two separate reactors, not including a feedstock pretreatment reactor, whereby the first reactor contains at least a portion of the catalyst for stage A and the second at least another portion of catalyst for stage A and also catalyst necessary for stage C.

25. (previously added) A process according to claim 14, wherein stage B for

Appl. No.: 09/897,757
Amdt. dated: May 5, 2003
Reply to Office Action of February 5, 2003

the elimination of H₂S is carried out by adsorption in the presence of an adsorbent mass selected from the group consisting of zinc oxide, copper oxide and molybdenum oxide.

26. (previously added) A process according to claim 14, wherein H₂S is separated using a membrane.

27. (previously added) A process according to claim 17, wherein stage C is carried out in the presence of a catalyst comprising at least one base metal selected from the group consisting of nickel, cobalt, iron, molybdenum and tungsten.

β1 28. (previously added) A process according to claim 18, wherein stage C is carried out in the presence of a catalyst comprising at least one base metal selected from the group consisting of nickel, cobalt, iron, molybdenum and tungsten.

29. (previously added) A process according to claim 27 wherein the catalyst for stage A is different from the catalyst for stage B.

30. (previously added) A process according to claim 29 implemented with at least two separate reactors, not including a feedstock pretreatment reactor, whereby the first reactor contains catalyst for stage A and the second reactor contains at least catalyst for stage C.

31. (previously added) A process according to claim 29 implemented with at least two separate reactors, not including a feedstock pretreatment reactor, whereby the first reactor contains at least a portion of the catalyst for stage A and the second at least another portion of catalyst for stage A and also catalyst necessary for stage C.

--32. (new) A process according to claim 14, wherein the H₂/HC ratio is 300-600

Appl. No.: 09/897,757
Amdt. dated: May 5, 2003
Reply to Office Action of February 5, 2003

liters per liter.

B1

33. (new) A process according to claim 14, wherein the H_2/HC ratio is 330-600
liters per liter.--
